U.S. Patent App. No. 10/074,021 Docket: 032739.073

AMENDMENT TO THE CLAIMS

1. (currently amended) An image forming apparatus comprising a rotatable image carrier, and a charging means, an exposing means, a developing means, a transferring means and a cleaning means, which are sequentially arranged in the vicinity of the rotatable image carrier, wherein a toner remaining on the surface of the rotatable image carrier is removed by the cleaning means after going through the developing means and the transferring means;

said cleaning means has an elastic blade, which is supported by a supporting member and is contacted with the surface of the image carrier at a contact pressure of not less than 8 g/cm and not more than 20 g/cm in terms of a linear pressure, and a press-contact angle of the elastic blade is not less than 12° and not more than 30°; and

said image carrier is an organic photosensitive electrophotosensitive material comprising a conductive substrate, and a single-layer type photosensitive layer made of a binder resin containing at least an electric charge generating material, and an electric charge transferring material, and a hole transferring material, which is formed on the conductive substrate;

wherein the image carrier is an electrophotosensitive material comprising a conductive substrate, and a single layer type photosensitive layer made of a binder resin containing at least an electric charge generating material, an electron transferring material and a hole transferring material, which is formed on the conductive substrate, and the solid content of the binder resin is not less than 50% by weight and not more than 70% by weight based on the whole solid content in the photosensitive layer and, moreover, a pair of paper transporting rollers for paper transporting are arranged on a path for transporting

a transfer paper from a paper feeding portion to the transferring means, and a paper

transporting roller at the side to be transferred among a the pair of paper transporting

rollers has a cleaning means for removing paper powders adsorbed on the paper

transporting roller at the side of the surface to be transferred from the roller, wherein said

paper rollers are composed of a first roller located at the side onto which the a toner

image is transferred and a second roller located opposite the transfer paper, wherein at

least the surface layer of the first roller is a cylindrical material of polyoxymethylene

(POM), the surface of the second roller is a cylindrical material of an ethylenepropylene

(EPDM) rubber and the cleaning means is composed of a brush roller flocked with

polyester fibers, a dusting plate, and a housing.

2. (original) The image forming apparatus according to claim 1, wherein the linear

pressure is not less than 10 g/cm and not more than 18 g/cm.

3. (original) The image forming apparatus according to claim 1, wherein the linear

pressure is not less than 10 g/cm and not more than 18 g/cm and the press-contact angle

is not less than 15° and not more than 25°.

4-6. (canceled)

7. (previously presented) The image forming apparatus according to claim 1, wherein, in

the electrophotosensitive material, the binder resin in the photosensitive layer is a

Page 3 of 11

copolymerized polycarbonate resin having a repeating structural unit represented by the general formula [1]:

$$\begin{array}{c|c}
R^{10} & R^{11} & 0 \\
\hline
0 & C & C
\end{array}$$

wherein R¹⁰ and R¹¹ are the same or different and represent a hydrogen atom or an alkyl group having 1 to 3 carbon atoms, and a repeating structural unit represented by the general formula [2]:

$$-\left(0 \stackrel{R}{\longrightarrow} \stackrel{R}{\longrightarrow} \stackrel{R}{\longrightarrow} \stackrel{R}{\longrightarrow} \stackrel{R}{\longrightarrow} \stackrel{R}{\longrightarrow} 0 \stackrel{R}{$$

wherein R^{20} and R^{21} are the same or different and represent a hydrogen atom, an alkyl group having 1 to 3 carbon atoms, or a phenyl group, and R^{22} and R^{23} are the same or different and represent an alkyl group having 1 to 3 carbon atoms, a phenyl group, or a cycloalkylidene group which may form a ring to have a substituent.

8. (previously presented) The image forming apparatus according to claim 1, wherein, in the electrophotosensitive material, the binder resin in the photosensitive layer is a copolymerized polycarbonate resin having a repeating structural unit represented by the general formula [1]:

wherein R^{10} and R^{11} are the same or different and represent a hydrogen atom or an alkyl group having 1 to 3 carbon atoms.

9. (previously presented) The image forming apparatus according to claim 1, wherein, in the electrophotosensitive material, the binder resin in the photosensitive layer is a copolymerized polycarbonate resin having a repeating structural unit represented by the general formula [1]:

$$\begin{array}{c|c}
R^{10} & R^{11} & 0 \\
\hline
0 & -C & -C
\end{array}$$

wherein R¹⁰ and R¹¹ are the same or different and represent a hydrogen atom or an alkyl group having 1 to 3 carbon atoms,

a repeating structural unit represented by the general formula [2]:

$$-\left(0 \stackrel{R^{20}}{-} \stackrel{R^{22}}{-} \stackrel{R^{21}}{-} \stackrel{0}{0} \stackrel{\parallel}{-} \right)$$

wherein R²⁰ and R²¹ are the same or different and represent a hydrogen atom, an alkyl group having 1 to 3 carbon atoms, or a phenyl group, and R²² and R²³ are the same or different and represent an alkyl group having 1 to 3 carbon atoms, a phenyl group, or a cycloalkylidene group which may form a ring to have a substituent,

and a repeating structural unit represented by the general formula [3]:

wherein X^{30} , X^{31} and X^{32} are the same or different and represent $-(CH_2)_n$ - (n represents an integer of 1 to 6), R^{30} , R^{31} , R^{32} and R^{33} are the same or different and represent a hydrogen atom, a phenyl group, or an alkyl or alkoxy group having 1 to 3 carbon atoms, and m represents a numerical value of 0 to 200.

10. (canceled)

U.S. Patent App. No. 10/074,021 Docket: 032739.073

11. (original) The image forming apparatus according to claim 7, wherein the content of

the repeating structural unit represented by the general formula [1] in the copolymerized

polycarbonate is within a range from 10 to 50 mol % based on the total amount of the

binder resin of the outermost layer.

12. (original) The image forming apparatus according to claim 8, wherein the content of

the repeating structural unit represented by the general formula [1] in the copolymerized

polycarbonate is within a range from 10 to 50 mol % based on the total amount of the

binder resin of the outermost layer.

13. (original) The image forming apparatus according to claim 9, wherein the content of

the repeating structural unit represented by the general formula [1] in the copolymerized

polycarbonate is within a range from 10 to 50 mol % based on the total amount of the

binder resin of the outermost layer.

14. (canceled)

15. (previously presented) The image forming apparatus according to claim 7, further

comprising a repeating structural unit represented by the general formula [3]:

wherein X^{30} , X^{31} and X^{32} are the same or different and represent $-(CH_2)_n$ - (n represents an integer of 1 to 6), R^{30} , R^{31} , R^{32} and R^{33} are the same or different and represent a hydrogen atom, a phenyl group, or an alkyl or alkoxy group having 1 to 3 carbon atoms, and m represents a numerical value of 0 to 200, and

wherein the content of the repeating structural unit represented by the general formula [3] in the copolymerized polycarbonate is within a range from 0.05 to 10 mol % based on the total amount of the binder resin of the outermost layer.

- 16. (original) The image forming apparatus according to claim 9, wherein the content of the repeating structural unit represented by the general formula [3] in the copolymerized polycarbonate is within a range from 0.05 to 10 mol % based on the total amount of the binder resin of the outermost layer.
- 17. (previously presented) The image forming apparatus according to claim 1, wherein, in the electrophotosensitive material as the image carrier, the binder resin contains, as a main component, a polycarbonate resin having a repeating structural unit represented by the general formula [4]:

wherein R^{40} and R^{41} are the same or different and represent a hydrogen atom or an alkyl group having 1 to 3 carbon atoms, provided that R^{40} and R^{41} are not simultaneously hydrogen atoms.

18. (canceled)

19. (previously presented) The image forming apparatus according to claim 1, wherein the image carrier is a cylindrical drum having a single-layer type photosensitive layer and the wear resistance [(Wear amount, μ m) × (Drum diameter, mm)]/[(Drum driving time, min) × (Drum peripheral speed, mm/sec)] of the single-layer type photosensitive layer is not more than 0.0004.

20. (canceled)